Listing of Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Claim 1-205: (Cancelled).

Claim 206 (new):   A method of selectively activating and/or targeting at least one stem cell, comprising:

(a) associating the stem cell with a magnetizable particle; and

(b) magnetically manipulating the stem cell in a remote manner.

Claim 207 (new): The method of claim 206, further comprising:

(a) targeting the stem cell to a site of repair and/or holding the cell at the site; and

(b) conditioning and/or differentiating the stem cell.

Claim 208 (new):   The method of claim 206, wherein the magnetizable particle is associated directly with the stem cell.

Claim 209 (new): The method of claim 206, wherein the magnetizable particle is associated with the stem cell by means of an antibody or enzyme that binds to the cell.

Claim 210 (new): The method of claim 206, wherein the method is carried out *in vivo* and the stem cell is manipulated from outside the body.

Claim 211 (new): The method of claim 206, wherein the magnetizable particle is a nanoparticle.

Claim 212 (new):   The method of claim 206, wherein magnetically manipulating the stem cell comprises remote activation of at least one specific stem cell membrane receptor.

Claim 213 (new):   The method of claim 212, wherein the at least one stem cell membrane receptor is present in human bone marrow stem cells.

Claim 214 (new): The method of claim 212, wherein the stem cell receptor type is selected from the group consisting of: mechano-activated ion channels; potassium channels; sodium channels; chloride channels; calcium channels; integrins; and surface membrane binding sites.

Claim 215 (new): The method of claim 206, wherein magnetically manipulating the stem cell results in early stage differentiation of cell type.

Claim 216 (new): The method of claim 206, wherein the at least one stem cell is a mesenchymal stem cell.

Claim 217 (new): The method of claim 206, wherein the stem cell is magnetically manipulated using a bioreactor.

Claim 218 (new): A method of magnetically manipulating a stem cell, comprising associating a magnetizable particle with the cell, wherein at least one ion channel within the cell is agonized or antagonized.

Claim 219 (new): A composition comprising at least one stem cell associated with a magnetizable particle wherein magnetic manipulation of the magnetizable particle results in agonizing or antagonizing of an ion channel within the stem cell.

Claim 220 (new): The composition of claim 219, wherein the stem cell is associated directly with the magnetizable particle.

Claim 221 (new): The composition of claim 219, wherein the magnetizable particle is associated with an antibody or enzyme that is subsequently associated with the stem cell.

Claim 222 (new): The composition of claim 219, wherein the magnetizable particle is associated with an ion channel in the stem cell.

Claim 223 (new): The composition of claim 222, wherein the ion channel is selected from the group consisting of: potassium channels; sodium channels; chloride channels; calcium channels; non-selective cation channels; and combinations thereof.

Claim 224 (new): A method for treating a patient suffering from a disorder in which an ion channel plays a role, the method comprising:

(a) administering to the patient at least one magnetizable particle associated with at least one stem cell; and

(b) applying a magnetic field external to the patient's body to agonize or antagonize at least one ion channel in the stem cell.

Claim 225 (new): The method of claim 224, further comprising administering to the patient a known therapeutically active agent.

Claim 226 (new): The method of claim 224, wherein the method comprises at least one treatment selected from the group consisting of: treatment of cancer; treatment of hypertension; pain relief; tissue repair; tissue adhesion; tissue regeneration; generation of artificial tissue; bone repair; bone growth; and wound healing.